BEFORE THE DEPARTMENT OF
NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA
*** * * * * * ***

IN THE MATTER OF APPLICATION FOR BENEFICIAL WATER USE PERMIT NO. 41H-30021840 BY TOWN OF MANHATTAN	**)** **)** **)**	**PROPOSAL FOR DECISION**

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Pursuant to the Montana Water Use Act (Title 85, chapter 2, part 3, Montana Code Annotated (MCA)), the provisions of the Montana Administrative Procedure Act (MAPA) (Title 2, chapter 4, part 6), and the administrative procedural rules (Admin. R. M. 36.12.201, *et seq.*), and after notice required by § 85-2-307, MCA, a hearing was held on September 4, 2008, in Bozeman, Montana, before the undersigned Hearing Examiner for the Montana Department of Natural Resources and Conservation (Department or DNRC) in the above-referenced matter. The purpose of the hearing was to determine whether a beneficial water use permit should be issued to Applicant Town of Manhattan (Applicant or Town) for the above Application under the criteria set forth in § 85-2-311, MCA. The Department has fully considered the record, including all testimony, evidence and argument submitted in this matter.

APPEARANCES

The Applicant appeared at the hearing by and through its counsel, Jane Mersen, and Matt W. Williams, counsel for Vidar Companies, Inc. The following witnesses were called to testify by the Applicant: Brent Miller, Project Manager for Gaston Engineering (Miller); Dr. Michael Nicklin, Nicklin Earth & Water, Inc. (Nicklin); and John Carstensen, consultant with Nicklin Earth & Water, Inc. (Carstensen).

Because of the conditional settlement between the parties, the Hearing Examiner notified the parties that the Objectors were not required to be present at the hearing. However, if they did choose to appear, they would be allowed the opportunity to introduce any issues they wished or provide statements to add further clarification to the settlement conditions. The following Objectors appeared at the hearing: Bill Schenk, on behalf of Montana Department of Fish, Wildlife and Parks (FWP); David Weaver, on behalf of Association of Gallatin Agricultural Irrigators (AGAI); Michael Cusick, on behalf of F Double D, LLC (FDD); and Virginia Heavner (Heavner). Counsel for Objector Montana Trout Unlimited (TU) was unable to be present at the

hearing; however, TU and FWP agreed previously that counsel for FWP would represent TU's interests at the hearing. Objectors Janice M. Dyk (Dyk), William Heavner (Heavner), and Samuel M. and Diane R. Buckman (Buckman) were not present at the hearing.

DNRC Staff Expert, Bill Uthman, Hydrogeologist (Uthman), appeared at the hearing and was available for questions regarding his Staff Expert Memorandum, dated July 11, 2008, and his technical opinion in the matter.

EXHIBITS

Applicant offered and the Hearing Examiner accepted and admitted into evidence the following exhibits:

- **Exhibit 1:** Copy of a Report entitled *Ground-water Model Town of Manhattan Beneficial Use Application (Adapted for Vidar Beneficial Use Application)*, prepared by Nicklin Earth & Water, Inc., August 2008; and

- **Exhibit 2:** Copy of an *Application to Change a Water Right Town of Manhattan Pioneer Crossing, Centennial Village on Behalf of the Baker Ditch Company, Gallatin County, Montana*, prepared by Nicklin Earth & Water, Inc., September 2008.

Objector FDD offered and the Hearing Examiner accepted and admitted into evidence the following exhibit:

- **Exhibit 1:** Copy of a Consent to Administrative Order, dated June 2, 2008, entered into between FDD and the Applicant.

PRELIMINARY MATTERS

Prior to the hearing, the Applicant notified DNRC that all objections in this matter were conditionally withdrawn by the Objectors, as a settlement had been reached between the parties. Applicant then indicated at the hearing that it was in the process of finalizing a revised settlement which it was not ready to present at the hearing, which hearing was held for the Applicant to explain the previous settlement. Applicant raised an objection on the record at the hearing that it should not have to proceed to a hearing before the DNRC on the Application, due to the settlement and conditional withdrawal of all of the objections to the Application. Applicant's objection was based on the recent decision issued in the Montana Eighteenth Judicial District Court in Gallatin County on May 12, 2008, entitled Bostwick Properties, Inc. vs. Montana DNRC, Cause No. DV-07-917AX, *on appeal*, Case No. DA-08-248 (Bostwick). Objectors FWP, TU, and AGAI indicated at hearing that while they were optimistic that a revised settlement would be reached, their objections were not withdrawn. The proposed settlement

conditions are not part of the Application determined "correct and complete" and ready for further processing by DNRC.

As stated previously in this proceeding, it is the DNRC's opinion that the Bostwick decision does not provide an allowance for DNRC to issue a decision or statement of opinion on whether the proposed Application meets the statutory criteria under § 85-2-311, MCA, without proceeding to a hearing first before the DNRC on the objections, any conditions agreed to by the parties, and any potential application issues of the DNRC. *See* §§ 85-2-309, and -312, MCA. Valid objections were filed under § 85-2-308, MCA, and the Department is required to hold a contested case hearing on valid objections under §85-2-309, MCA. While this Application was filed in 2006, Applicant requested and received five extensions of the procedural schedule in this case. As stated on the record and as noticed to the parties, this hearing was the time and place for the Applicant to present any and all written and oral evidence it wanted the DNRC to consider in this matter in determining whether the Applicant proved the statutory criteria found in § 85-2-311, MCA, by a preponderance of evidence. The Objectors were also afforded the opportunity to introduce any issues or provide statements at the hearing to add further clarification to the settlement conditions. Therefore, this objection is overruled.

As discussed further below, the Hearing Examiner requested the Applicant submit a post-hearing summary of the Application explaining the proposed project and the revised conditions agreed to between the Applicant and the Objectors, including an explanation as to why the conditions are adequate under the statutory criteria. At the request of the Applicant, the record was left open after hearing, until September 15, 2008[1], to receive the post-hearing submission. On September 30, 2008, the Applicant submitted a *Consent to Entry of Administrative Order*, dated September 26, 2008, to the DNRC. On October 1, 2008, the Applicant submitted a *Synopsis of Application*, dated October 1, 2008, to the DNRC. The record in this matter is considered to have closed as of October 1, 2008.

Official notice is taken of all documents in the record, including those exhibits already contained within the DNRC's files.

Being well and fully advised, the Hearing Examiner makes the following Findings of Fact (FOF) and Conclusions of Law (COL).

[1] Applicant stated that it would have the post-hearing submission to the Hearing Examiner within one-week. To ensure the Applicant had sufficient time, the Hearing Examiner ordered the Applicant to submit the Application summary within 10-days of the date of the hearing, or September 15, 2008.

FINDINGS OF FACT

General

1. Application for Beneficial Water Use Permit 41H-30021840 in the name of the Town of Manhattan (by Vidar Companies, Inc.), and signed by Anthony M. Haag, Mayor, was filed with the Department on April 28, 2006. Applicant is proposing a new appropriation for municipal use with two ground water wells. (Department file)

2. The Environmental Assessment (EA) prepared by the Department for this Application and dated May 23, 2006, was reviewed and is included in the record of this proceeding. (Department file)

3. A public notice describing facts pertinent to this Application was published in the *Bozeman Daily Chronicle*, a newspaper of general circulation, on July 6, 2006, and was mailed to interested persons listed in the Department file. (Department file)

4. The deadline for filing objections to the Application expired on August 6, 2006. The DNRC received seven timely valid objections to the Application, from FWP, AGAI, FDD, TU, Mrs. Dyk, Mr. and Mrs. Buckman, and Mr. and Mrs. Heavner. (Department file)

5. In the Application and as noticed, the Applicant requests a ground water appropriation at the rate of 575 gallons per minute (gpm) and up to 560 acre-feet (ac-ft) of water per year. The proposed period of diversion is January 1 through December 31, inclusive each year. The requested appropriation will be used for domestic, commercial, irrigation, and fire protection (municipal) in the proposed Pioneer Crossing subdivision, located in the NE1/4NW1/4SW1/4, Section 3, Township 1 North, Range 3 East, and Centennial Village subdivision located in the SE1/4SE1/4NE1/4, Section 3, Township 1 North, Range 3 East, near the town of Manhattan, Gallatin County, Montana. The subdivisions are located about 1.75 miles southwest of the Gallatin River. Pioneer Crossing and Centennial Village subdivisions are part of a common Planned Unit Development. (Department file; Miller Testimony)

6. At full build-out, the subdivisions will be comprised of a total of 363 lots (241 single-family dwellings; 107 single-family with accessory dwellings; and 15 commercial lots). The residential lots are approximately 1/3-1/2-acre size lots, and the commercial lots are approximately 1-acre size lots. (Department file; Miller Testimony)

7. The proposed subdivisions will be annexed into the Town corporate limits, serving a municipality (the town of Manhattan). The two new ground water supply wells will be connected

to the Town's water distribution system; therefore, the place of use can occur throughout the Town. The Town and proposed appropriation are located within the upper Missouri River basin closure area, which consists of the drainage area of the Missouri River and its tributaries above Morony Dam. This Application seeks to appropriate ground water for municipal use, which is an exception under the basin closure act. The Application did not contain a mitigation (augmentation) plan at the time it was filed. (§ 85-2-343(2)(c), MCA (2005)).

8. On April 11, 2006, the Montana Supreme Court ruled in Montana Trout Unlimited v. Department of Natural Resources and Conservation (2006), 331 Mont. 483, 133 P.3d 224 (Trout Unlimited). This decision applied to DNRC's processing of all future and pending water use permit applications, including this Application, seeking the use of ground water in the upper Missouri River closed basin (basin closed to new appropriations of surface water), and to the use of ground water "immediately or directly connected to surface water," basin closure exception as it existed in 2005. The decision recognizes the effect on surface water of prestream capture from ground water appropriations. (*See* § 85-2-343, MCA (2005)).

9. Applicant began aquifer testing in October 2005, in order to obtain hydrogeological information for the Application. Department Hydrogeologist Bill Uthman summarized his completed review of the hydrogeological information provided for this Application in a memorandum to DNRC Water Resources Specialist, Porter Dassenko, dated May 10, 2006. (Department file)

10. On January 24, 2007, notification was sent to the Town and all parties of record that a contested case hearing was set for June 14, 2007, in this matter. A pre-hearing conference call was held on February 8, 2007, to establish contested case deadlines and address any issues pertaining to the hearing the parties wished to discuss. The Town failed to appear at this pre-hearing conference and was found to be in default, pursuant to Admin. R. M. 36.12.212. Consequently, a procedural schedule was established with the parties who appeared and without the Town. The procedural schedule allowed parties time to pursue discovery and prepare for a full and fair hearing on the criteria. (Department file)

11. On April 10, 2007, DNRC sent a letter to the Applicant regarding the impacts on the pending Application as a result of the decision issued on March 26, 2007, from the Montana First Judicial District Court for Lewis & Clark County in Lohmeier, et al. v. DNRC, Cause No. ADV-2006-454 (Lohmeier). All pending applications for municipal use had to be re-evaluated by DNRC in light of the holding in Lohmeier on the meaning of municipal use. DNRC notified the

Applicant in a letter dated April 27, 2007, that it had determined that DNRC could continue processing the pending Application under the municipal use basin closure exception. (Department file)

12. On May 15, 2007, the Town sent a *Joint Request to Vacate Hearing Date and Scheduling Order* to the Hearing Examiner, on the basis that the parties needed additional time to work out settlement details. On May 16, 2007, an order was issued vacating the hearing as to those parties who had entered into a settlement and agreed that the hearing date could be vacated. However, the Hearing Examiner ordered the remaining parties who had not entered into a settlement and had not agreed to vacate the hearing date to respond to the joint request to vacate within 10 days. Objectors Heavner and Dyk stated they wished to continue their objections; therefore, a mandatory conference call with all parties was set for June 5, 2007. During the June 5, 2007, conference call, the parties all agreed that they were engaging in settlement with the Town, and they requested the hearing be vacated. (Department file)

13. On June 6, 2007, the Hearing Examiner issued an Order vacating the hearing and the contested case deadlines. In this Order, the Hearing Examiner required the parties to submit a written status report within 60 days, to inform the Hearing Examiner on the progress of the settlement and whether a contested case hearing was still necessary. On August 6, 2007, the Town submitted a status report requesting an additional four weeks to work out settlement details. (Department file)

14. On August 8, 2007, the Hearing Examiner issued an Order granting the four-week extension. In this Order, the Hearing Examiner required the parties to submit a written status report by September 10, 2007, informing the Hearing Examiner if they needed additional time to finalize settlement or if a prehearing conference should be set to establish contested case deadlines. The Town did not submit a status report by that date; however, it did submit one on October 1, 2007, requesting an additional four-week extension. (Department file)

15. On October 10, 2007, the Hearing Examiner issued an Order granting the four-week extension. In this Order, the Hearing Examiner required the parties to submit a written status report by November 7, 2007, informing the Hearing Examiner if they needed additional time to finalize settlement or if a prehearing conference should be set to establish contested case deadlines. The Town submitted a status report on November 5, 2007, stating they had agreed in principle with some of the Objectors to augment or replace certain depletions to the Gallatin River. To achieve the replacement, the Town further stated they had an agreement in principle

with a third party appropriator, which would reduce diversions under its appropriations (i.e. leave water in the Gallatin River), in amounts required to offset the asserted depletions. The Town requested a status conference with the parties and the Hearing Examiner, to determine whether DNRC would require any change of water right approval as a result of this augmentation, as opposed to a condition requiring such a reduction in diversions on this new water use permit. (Department file)

16. The Hearing Examiner issued an Order on November 15, 2007, informing the parties that it was inappropriate for the Hearing Examiner to be involved in any discussions pertaining to settlement or terms of the permit with the parties, prior to the contested case hearing. However, the Town was granted additional time, until January 30, 2008, to submit a final settlement to DNRC or a status report informing the Hearing Examiner if they needed additional time to finalize settlement or if a pre-hearing conference should be set to establish contested case deadlines. (Department file)

17. On January 28, 2008, the Town submitted an additional request for a conference call with the Hearing Examiner, asking that DNRC implement procedures to determine whether the proposed settlement can be given effect without additional administrative proceedings. The Town also submitted a *Position Memorandum* summarizing the proposed settlement and augmentation plan (leaving water instream in the Gallatin River). (Department file)

18. On February 6, 2008, the Hearing Examiner issued an Order, reiterating that there is no current process that authorizes the Hearing Examiner to comment upon any settlement terms or participate in settlement discussions when the matter is contested. The Hearing Examiner informed the parties that upon review of the *Position Memorandum*, it appeared there was still some question whether the terms were acceptable for purposes of issuing a permit under § 85-2-311, MCA, and therefore agreed to schedule a status conference. A status conference for February 21, 2008, was scheduled to discuss the *Position Memorandum*, set a date for a contested case hearing, and schedule contested case deadlines. (Department file)

19. During the February 21, 2008, conference call, the parties agreed to a revised scheduling order and set a date for hearing, July 15, 2008. (Department file)

20. On May 12, 2008, the Montana Eighteenth Judicial District for Gallatin County issued its decision in Bostwick. As stated above, the Bostwick decision provided in relevant part that the DNRC has no authority to issue a Statement of Opinion under § 85-2-310(3), MCA, where valid objections are filed, even if later settled. The DNRC must issue a “decision.” The Statement of

Opinion was previously the method used by the DNRC to evaluate criteria and consider any conditions on settlement if objections were withdrawn, conditionally or unconditionally. (*See* § 85-2-309, MCA).

21. On May 20, 2008, the Town submitted a *Notice of Settlement* between the Town and Objectors FWP, TU, AGAI, Mr. and Mrs. Heavner, and Mrs. Dyk. On May 30, 2008, DNRC received an *Agreement* dated May 30, 2008, entered into between the Town and Objectors Mr. and Mrs. Buckman. On June 2, 2008, DNRC received a *Consent to Entry of Administrative Order* entered into between the Town and Objector FDD. Some objections were unconditionally withdrawn and others were withdrawn based on certain conditions. DNRC is not bound by private settlements, but may consider conditions as they relate to meeting the criteria under § 85-2-311, MCA. *(See* Admin. R. M. 36.12.207; § 85-2-312, MCA; Department file)

22. On June 23, 2008, based on the Bostwick decision which removed the DNRC's ability to evaluate criteria and consider conditions through a Statement of Opinion when there are objections, DNRC ordered that the hearing would proceed as scheduled before the Hearing Examiner on July 15, 2008. In that same order, the Hearing Examiner sought clarification from the Applicant as to what exactly it was proposing given the changes agreed to through settlement and its evolving mitigation plan. The mitigation plan was not part of the original Application publically noticed after the correct and complete determination. The Hearing Examiner further notified the parties that she saw potential issues with legal availability and adverse effect in the filed Application. A pre-hearing conference call was scheduled for June 30, 2008, to discuss the hearing procedures and any other issues the parties wished to address. (Department file)

23. As discussed and agreed by the parties in the conference call, on July 2, 2008, the Hearing Examiner ordered that any motions, reports, or summaries of the Application be submitted no later than July 7, 2008, and staff expert Bill Uthman would submit a report evaluating the evidence contained in any pre-hearing memoranda and the Application as modified by the conditions and mitigation plan no later than July 11, 2008. (Department file)

24. On July 7, 2008, the Town submitted a *Notice of Permit Conditions*, summarizing the revised Application and proposed mitigation plan to offset stream depletion, and the settlement terms agreed to by the parties. The Town also submitted a *Statement of Principles*, stating it disagreed with DNRC that it was required to seek a change of water right application for the mitigation plan, where the terms of the permit require mitigation. The Applicant further stated it

believed the DNRC should be precluded from exercising any further substantive authority over the Application, based on the holding of the Bostwick decision. (Department file)

25. On July 11, 2008, DNRC Staff Expert Bill Uthman submitted a memorandum analyzing the information submitted from the Town. Mr. Uthman raised several questions in this memorandum, stating that the Applicant would need to answer the questions posed in the memorandum in order to address the Hearing Examiner's request for clarification of the proposed mitigation plan to offset stream depletion. On this same date, the Town faxed DNRC a request to continue the hearing for the reason that it received Mr. Uthman's July 11, 2008, memorandum at 1:30 p.m. on July 11, 2008 (the date agreed by the parties), and would not have adequate time to prepare an expert response to the memorandum, or answer Mr. Uthman's questions raised in the memorandum at the July 15, 2008, hearing. The Town requested a hearing be rescheduled to September 4, 2008. On July 14, 2008, an Order continuing the hearing to September 4, 2008, was issued. (Department file)

26. On August 27, 2008, a pre-hearing conference was held with all parties. At this conference, the Hearing Examiner requested the Town submit a detailed written summary of the Application, including an explanation of conditions agreed to under any settlement agreements, and the proposed mitigation, prior to or on the day of the hearing. (Department file).

27. A hearing was held on September 4, 2008, in Bozeman, Montana. The Town did not present a written summary of the Application to the Hearing Examiner as requested. The Town informed the Hearing Examiner at this hearing that it was still working through a new settlement with the Objectors, which terms differed from those submitted in July 2008, and it was not prepared to present those conditions to the Hearing Examiner. No new evidence was presented to answer the questions raised in Mr. Uthman's July 11, 2008 Memorandum, or to address the Hearing Examiner's issues regarding legal availability or adverse effect under § 85-2-311, MCA. The Hearing Examiner requested the Applicant submit a detailed written summary of the Application, with the new settlement conditions and proposed mitigation, by September 15, 2008. (Department file; Hearing record)

28. On September 30, 2008, the Applicant submitted a *Consent to Entry of Administrative Order*, dated September 26, 2008, agreed to by all parties to this matter, which set forth a proposed aquifer recharge plan; it did not include the previous instream mitigation plan. (Department file)

29. Pursuant to the September 26, 2008, *Consent to Administrative Order*, the Applicant agreed to the following conditions, in relevant part: (a) Applicant shall install a totalizing flow meter; (b) shall submit to DNRC complete water measurement reports setting forth both daily and annual usage; (c) shall not use water withdrawn from the wells that constitute the points of diversion outside the place of use without first obtaining the necessary change authorizations or permits to include an enlarged service area; (d) shall divert or cause to be diverted 0.70 cfs from the Gallatin River out of Water Right Claim No. 41H-119990-00 (priority date of October 15, 1912) for a period of 100 days during the period from May 15 through September 30, for a total annual diversion of 138.21 ac-ft/year; (e) shall discharge such amounts of water into underground perforated pipe located with the place of use to cause said water to be discharged below the ground surface at a depth of at least 3 feet; (f) shall file change of water right to change the purpose of use of said Water Right No. 41H-119990-00; and (g) shall not divert water where less than 114.22 acres[2] are not being irrigated in whole or in part with water diverted through or secured from Water Right Nos. 41H-119990-00, 119984-00, 119985-00, 119986-00, 119987-00, 119988-00, and/or 119989-00. (Department file; *Consent to Admin. Order*, p. 3-4)

30. On October 1, 2008, the Applicant submitted a *Synopsis of Application*, dated October 1, 2008, which essentially reiterated the conditions agreed to by the parties as set forth in the September 26, 2008 *Consent to Entry of Administrative Order*, and the proposed mitigation (diverting water out of an existing right in designated amounts for discharge into an infiltration gallery). The Applicant stated the flow rate, volume, point of diversion and place of use remained as set forth in the public notice. The record was considered closed upon receipt of this information. (Department file)

31. It is the Hearing Examiner's understanding that the Applicant is proposing to use shares in the Baker Ditch Company, owned by the developer, Vidar Companies, Inc., to mitigate potential adverse effects to senior surface water users from the consumption of ground water under this Application. However, the Applicant did not present a formal mitigation plan to the Hearing Examiner at the September 4, 2008, hearing. Applicant submitted a copy of a proposed draft change application, dated September 2008, as an exhibit (Exhibit 2) at the

[2] Applicant stated that the 114.22 acres are depicted on Exhibit A attached to the Consent to Administrative Order; however, the version submitted to DNRC did not contain said Exhibit.

hearing. This change application had not been provided to Baker Ditch Company or presented to the DNRC as a formal change application at the time of hearing. (Department file)

32. This proposed Order presents the Department's decision in this matter based on the information in the record as that information addresses the statutory criteria for issuance of a beneficial water use permit under § 85-2-311, MCA (2005). This Application is being judged on the law that was in effect when it was submitted. HB 831 (now §§ 85-2-360 *et seq.,* MCA (2007)) is not applicable because it expressly does not apply to pending applications. (2007 Mont. Laws § 31, Ch. 391)

Physical Availability

33. Applicant has a conditional approval for locating and constructing up to four (4) wells from the Montana Department of Environmental Quality (DEQ), Public Water Supply (PWS) Section, EQ#05-2051. This Application is for two (2) wells. Because it is a public water supply, the Applicant asserted that it used DEQ standards and requirements to design the system, and calculated the flow rate and volume needed for the municipal purpose based upon DEQ design criteria and requirements (peak hour and per capita). The record does not contain a copy of the conditional Plan Approval from DEQ. (Department file; Miller Testimony)

34. A test well, PC/CV Public Well #1 (Well #1), which is intended to satisfy Phase I of this project, was drilled by a licensed water well contractor in accordance with the rules of the Montana Board of Water Well Contractors. This proposed well will be connected to the Town's water distribution system, which has five sources of water supply. Applicant estimates the subdivisions at full build-out require an "Average Day Demand" of 347 gpm according to DEQ standards, but in order to satisfy peak demands and supplement fire flows, the Town proposes that the well pump be capable of up to 575 gpm[3]. The wells will operate in a cyclic manner at variable flows (utilizing variable frequency drives). Actual flows will be dependent on system pressures and demands, but Applicant estimates typical flows will be 200-300 gpm. (Department file; Technical Report to Application, p. 2 of 23)

35. Applicant submitted test-pumping information for Well #1. This well consists of a 26" diameter borehole, with a 16" diameter steel casing that extends to a depth of 442 feet below ground surface (bgs). A 16" stainless steel well screen extends beyond the solid steel casing from approximately 392-442 feet bgs. The well intake is isolated from the shallow aquifers

[3] Applicant originally requested a flow rate of 347 gpm, but subsequently amended the flow rate in the Application to 575 gpm on May 7, 2006.

found in wells nearby by providing cement grout in the annular space of the well to a depth of 0-80 feet bgs. The grout seal is expected to inhibit surface water contamination and minimize water withdrawal from the upper aquifer zones in which domestic wells are completed in the surrounding areas. The annular space underlying the cement grout is packed with 3/8" diameter gravel for the remainder of the total depth of the well. (Department file; Technical Report to Application, p. 2 of 23)

36. Pumping was accomplished with a 150 hp line-shaft turbine pump set at approximately 390 feet bgs (above the top of the well screen). Static water level was 28.7 feet bgs, with the pumping water level at approximately 374.7 feet bgs (about 17.3 feet above the well screen). The well was pumped continuously for 72 hours at 643 gpm, with drawdown of about 346 feet. The flow meter odometer revealed a *weighted average* of 613 gpm over the entire 72-hours, with a projected drawdown of 360 feet (measured from static water level). Applicant states that actual drawdown will be significantly less than the projected drawdown due to the cyclic operation of the wells at 200-300 gpm during normal pumping. (Department file; Technical Report to Application, pp. 8-9; 11-16 of 23)

37. Well drilling shows that Well #1 was constructed through Quaternary alluvium and Tertiary strata, with lenses of unconsolidated sand and gravel within confining layers which may yield coefficients of transmissivity up to 26,000 gpd/foot. Tests were representative of a leaky confined aquifer bounded horizontally and vertically by less permeable layers. (Department file; Technical Report to Application, pp. 9, 11-16 of 23)

38. Applicant estimated Well #1 will pump up to 575 gpm for peak demands and fire flows, and the well pump will be set above the screen at 390 feet bgs. Since the projected drawdown (i.e. 388.7 feet bgs) at the pumping rate of 643 gpm is less than the pump setting of 390 feet bgs or top of screens, Applicant estimates the pumping water level to be higher than observed during the aquifer test. (Department file; Technical Report to Application, pp. 9, 11-16 of 23)

39. As the project proceeds with Phases II, III, and IV, Applicant asserts that only one additional PWS well would be necessary to satisfy DEQ requirements (i.e. fire suppression). Well #1 is capable of providing flow rate of 575 gpm, so Applicant believes the second well may be designated for fire protection or the water rights could be distributed between the wells. The Hearing Examiner is uncertain to which water rights the Applicant is referring. (Department file; Technical Report to Application, pp. 9, 11-16 of 23)

40. Applicant states the Town's existing water supply is capable of providing much of the necessary fire flow and maximum day demand that the proposed development requires under DEQ standards. However, as part of the water line extension/connection at Nixon Gulch Road & Railroad Ave North, the Applicant intends to replace the existing 6" diameter water line with a new 10" diameter water line. (Department file; Technical Report to Application, pp. 9, 11-16 of 23)

41. Applicant states the water demands were based on the uses within the subdivisions' boundaries as estimated by the Applicant's consultant using DEQ Circulars and assumptions generally used by the engineering community. (Department file; Miller Testimony)

42. Bill Uthman, DNRC Hydrogeologist, reviewed the Application and in a memorandum to Porter Dassenko, DNRC Water Resources Specialist, dated May 10, 2006, Mr. Uthman states that the Applicant sustained an average discharge of 613 gpm from the well for a period of 72 hours. Mr. Uthman also notes the Applicant ha projected drawdown observed in the proposed production well, assuming continuous pumping at 613 gpm, demonstrating that available drawdown will remain above the pump inlet for the period of diversion. (Department file; Technical Report to Application; Uthman Memo, dated May 10, 2006). The Applicant has provided sufficient data to prove that water is physically available in the amount requested. (§ 85-2-311(1)(a)(i), MCA)

Legal Availability

43. According to published and recognized information, the Gallatin Valley encompasses an area of about 540 square miles in the eastern half of the Three Forks structural basin, and intermontane basin in southwestern Montana. The Gallatin Valley was filled with as much as 6,000 ft of Tertiary-and Quaternary-age sediments consisting of boulders, cobbles, sand, silt, clay, and volcanic ash. (Noble, *et al.*, 1982, p. 71). The lowermost unit of valley-fill material is composed of Tertiary sediments, consisting mostly of sandstone, siltstone, claystone, and volcanic ash. The upper Tertiary sediments consist mostly of conglomerate, sandstone, siltstone, and claystone of fluvial origin. Bedrock underlying the valley-fill deposits in the Gallatin Valley and exposed in the surrounding areas consist of metamorphic, sedimentary, and volcanic rocks ranging in age from Precambrian through Cretaceous. (Department file; Technical Report to Application, p. 3 of 23)

44. According to published and recognized information, the source aquifer discharges to the Gallatin River along a reach beginning east of Manhattan to Logan, MT. Near Logan, steeply

dipping bedrock outcrops at the land's surface thus forming a barrier to ground water flow and causing discharge from the source aquifer to the Gallatin River. (Hackett, *et al.*, 1960). A ground water resource study was conducted by Hackett and others, which included the Manhattan area. The report referenced a test well (A2-2-33da) drilled in 1952, located about 1 mile northeast of this proposed project. The United States Geological Survey (USGS) well penetrated 55 feet of Quaternary alluvium overlying variable Tertiary strata to a total depth of 450 feet. Two principle water-bearing zones were encountered: 32-73 feet bgs and 215-300 feet bgs. The static water level for the upper zone was 32 feet bgs, while the static water level for the lower zone was 12 feet bgs, indicating the lower zone is confined and hydraulically separated from the upper zone. (Department file; Technical Report to Application, p. 3 of 23)

45. During his review of the Application, Mr. Uthman opined the aquifer is not hydraulically connected to surface water within the zone of influence and that induced surface water infiltration is unlikely to occur in the zone of influence as a result of the proposed production wells. However, pumping of these wells will result in long-term stream depletion impacts to the Gallatin River. Mr. Uthman and the Applicant both recognize the timing and location of these impacts are difficult to credibly evaluate because of numerous geologic and hydrologic uncertainties within this geographic area. (Department file; Uthman Memo, dated May 10, 2006; Technical Report to Application)

46. Applicant estimated the zone of influence using AQTESOLV, a generally recognized aquifer test analysis software. Applicant used a specific yield value of 0.04, a typical conservative value for an unconfined aquifer. Applicant stated that the zone of influence, defined as that area resulting in 0.01 feet of drawdown, was calculated to extend 13,350 feet from the pumped well. (Department file; Technical Report to Application, pp. 16-19 of 23)

47. Tertiary deposits in this area were found by the Applicant to be likely heterogeneous with boundaries along the northern portion of the zone of influence (i.e. Horseshoe Hills). A water right database search conducted by Applicant in 2006 found 137 ground water water rights located in the projected zone of influence, excluding the Horseshoe Hills portion due to its no-flow/low-flow boundary consisting of Paleozoic belt series Precambrian rock. Applicant states some of the records were not complete. Wells that did not indicate a depth and were not described as pit or surface water were assumed to be deeper than 140 feet. For domestic use, Applicant assumed a volume of 1.5 ac-ft, 0.5 ac-ft for stock use, and 2.5 ac-ft/acre for irrigation use. (Department file; App. F to Application; Technical Report to Application, pp. 16-19 of 23)

48. Applicant calculated the total legal water demand on the deeper aquifer (i.e. 140 feet-442 feet bgs) to be 1,405.92 ac-ft/year. Using Darcy's Law, the annual volume of water passing through the potential zone of influence was estimated to be 1,968.8 ac-ft/year. Applicant determined the existing appropriations plus the proposed demands are less than the aquifer flux (1,405.92 ac-ft/year + 560 ac-ft/year = 1,965.92 ac-ft/year < 1,968.8 ac-ft/year). Applicant states that it used a very conservative value for transmissivity (1,100 $feet^2$/day) and expects it to be slightly higher. (Department file; App. F to Application; Technical Report to Application, pp. 16-19 of 23)

49. Of the 137 ground water wells located within the zone of influence, Applicant found that 77 wells were completed in the shallower aquifer (less than 140 feet bgs). Applicant states the remaining 60 ground water water rights were not included in the flux calculation above. The Hearing Examiner presumes the 60 ground water water rights are located in the water producing zone (i.e. deep source aquifer), but it is not clear from the record. The Hearing Examiner is also uncertain why said water rights were not included in the flux calculation. I find the Applicant has not shown that water physically available exceeds the existing legal demands within the area of potential impact. (Department file; App. C and F to Application; Technical Report to Application, pp. 16-19 of 23)

50. The Applicant has not provided analysis of any evidence on the existing demands throughout the area of potential impact, including the Gallatin River. The Town proposes to offset any depletions to surface water, but the Applicant never identifies how the alleged net depletion was determined to demonstrate that the depletions will be offset by the proposed amount of mitigation water, as further explained in the discussion on adverse effect. Applicant must address the legal availability of surface water due to the depletions from the proposed appropriation. The Applicant has not proven that water can reasonably be considered legally available in the amount and during the period of requested appropriation. (§ 85-2-311(1)(a)(ii), MCA)

Adverse Effect

51. Applicant estimated the potential effects to area ground water wells using AQTESOLV, which showed that the drawdown and distance measured from the pumped well would be 2 feet at 5,000 feet; 3 feet at 4,100 feet; and 4 feet at 3,500 feet, for a pump rate of 347 gpm at 365 days of continuous pumping in the deep aquifer. Applicant evaluated only 347 gpm even though the requested flow rate is 575 gpm. Applicant states that observation wells #3 and #4

did not show more than 0.2 feet of drawdown at approximately 2,200 feet from the pumped well. Observation well #5 did not show more than 0.6 feet of drawdown at approximately 1,100 feet from the pumped well. (Department file; Fig. 3.2 and 3.5 of Application; Technical Report to Application, pp. 19-22 of 23)

52. According to Applicant's estimates, deep wells[4] (140 feet-422 feet bgs) will experience approximately 2-4 feet of drawdown; shallow wells (30 feet-80 feet bgs) will not be affected; and intermediate wells (100 feet-140 feet bgs), located near the pumped well, could experience up to 4 feet of drawdown. Applicant asserts that the area has a major amount of water bearing strata with reliable amounts of water and drawdown is not significant, so existing appropriators will not be adversely affected. (Department file; Technical Report to Application, pp. 19-22 of 23)

53. Applicant evaluated potential adverse impacts to surface water it found to be in the zone of influence, including the Gallatin River, East Gallatin River, and Camp Creek. Based on well logs of wells located along the Gallatin River and East Gallatin River, Applicant determined that the source aquifer is hydraulically disconnected from shallow unconfined alluvium by confining layers in the vicinity of Well #1. Along Camp Creek, Applicant found similar data showing the confined source aquifer is hydraulically disconnected from surface water in the vicinity of Well #1. However, this analysis did not address the full area of potential impact. (Department file; Technical Report to Application, pp. 19-22 of 23)

54. In the Application and as noticed, Applicant stated that it intends to install an in-line flow meter, which measures instantaneous and cumulative flows, at each pumphouse for each corresponding well. Applicant has agreed with the Objectors that it will install a totalizing flow meter that will measure both flow rate and total annual volume. Applicant agreed that it will also submit to DNRC complete water measurement reports setting forth both daily and annual usage. (Department file; Applicant's *Synopsis of Application*; Technical Report to Application, pp. 19-22 of 23)

55. During his review of the Application, Mr. Uthman determined the aquifer is not hydraulically connected to surface water within the zone of influence and that induced surface water infiltration (reverse hydraulic gradient) cannot occur as a result of the proposed production wells. However, pumping of these wells will result in long-term depletions to surface water flows in the Gallatin River if not mitigated. The proposed appropriation will capture water otherwise

[4] Records show these two wells are owned by the Town of Manhattan.

discharging to the Gallatin River. Mr. Uthman opined, and the Applicant acknowledges, the complexities of knowing with a precise degree the hydraulic connection within this geographic area. (Department file; Uthman Memo, dated May 10, 2006)

56. The Applicant states that the proposed aquifer recharge program, presumably that in the draft change application for Baker Ditch Company, set forth in the ground-water model conducted by Dr. Nicklin, combined with the flows of the treated wastewater will offset combined net depletions for all portions of the year for the potentially affected streams in the vicinity of the Town. Dr. Nicklin states the simulation results demonstrate the recharge basin likely has significant capacity to accept substantially greater quantities of recharge water for future mitigation needs of the Town. (Exhibit 1, p. 7; Nicklin Testimony)

57. Dr. Nicklin further puts forth in Exhibit 1 that according to transient simulations, the theoretical annual depletion is the same as the net annual pumping volume over time, which equates to 256.11 ac-ft/year from all streams represented in the model. Dr. Nicklin states the Gallatin River and other "potentially affected" streams (Gallatin River, Camp Creek, Randall Creek, Backlin Ditch) are about 1-1.5 miles from the pumping well; therefore, the time required to achieve the theoretical pumping depletion is beyond 100 years. At 100 years, Dr. Nicklin determined the simulated depletions total 218 ac-ft, which is about 85% of the theoretical pumping depletion assuming the model were run to steady-state conditions, and about 202 ac-ft of depletions are due to the "potentially affected" streams. (Department file; Nicklin Testimony; Exhibit 1, p. 6)

58. Dr. Nicklin testified that he had identified the aquifer characteristics via pumping tests, and there was water available for the Town's use, with only modest drawdowns at the nearest wells. Dr. Nicklin also testified there is no adverse effect based on the mitigation plan in the proposed draft change. Dr. Nicklin further testified that through the model, he was able to identify the amounts and timing of depletions to the Gallatin River. The Town has agreed to offset any depletions by diverting water out of an existing right in designated amounts for discharge into an infiltration gallery. By putting these amounts in perforated pipe underground, the Applicant states that any impacts will be eliminated as the water will percolate to the same aquifer from which the depletions are generated. (Department file; Nicklin Testimony; *Consent to Administrative Order*, p. 2-3; Exhibit 1)

59. Mr. Uthman pointed out in his July 11, 2008 Memorandum that the Applicant identifies lawn irrigation as the only source of stream depletion, and lists domestic and commercial as

beneficial use. Domestic and commercial consumptive use can range from 3-10% of the volume appropriated, depending on how domestic waste water is returned to the system. Five percent is a reasonable average value for domestic and commercial consumptive use, provided that waste water is recharged to the system. However, if waste water is "land applied", consumptive use is 100%. (Uthman Memorandum, dated July 11, 2008)

60. The Applicant used the Natural Resource and Conservation Service (NRCS) Irrigation Water Requirements (IWR) online software to calculate the stream depletion volume. Applicant states in the Narrative and Addendum to the proposed change application that it had determined "dry year" net irrigation requirements for pasture grass listed for the Belgrade airport weather station. Applicant reported that "of the appropriation maximum volume of 256.11 ac-ft, 138.21 ac-ft are consumed." (Exhibit 2, p. 1) The Department typically expects an applicant to use turf grass water use requirements found in the NRCS IWR software in preparing a consumptive use analysis. Turf grass includes grasses typically planted for lawns and generally has a higher water requirement than the pasture grass category. (Nicklin and Carstensen Testimony; Department file; Exhibit 2; Uthman Memo, dated July 11, 2008)

61. Applicant states that "the calculation of consumptive use is shown on Table 1." The Hearing Examiner cannot evaluate the Applicant's consumptive use calculations because Table 1 is not included in Exhibit 2 or in the record. The Applicant acknowledges in Exhibit 2, page 1, that domestic and commercial consumptive use is 5% and 100% of the municipal demand for lawn and garden is consumed. The Applicant indicates that their waste water system is a water treatment facility. The remainder returns to the local hydrologic system as treated wastewater discharge to the Gallatin River. (Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Department file; Exhibit 2)

62. Mr. Uthman reviewed the water supply calculations in order to estimate the Applicant's domestic and commercial consumptive use. (Technical Report, p. 4 of 23) Applicant estimates the domestic and commercial water demand is 110,550 gpd at full occupancy for Pioneer Crossing and Centennial Village subdivisions. (Technical Report, p. 6 of 23). Domestic and commercial use of 110,550 gpd equates to 123.84 ac-ft/year (i.e. 110,550 gpd × 365 days/year × 1 ft^3/7.48 gal × 1 ac-ft/43,560 ft^3 = 123.84 ac-ft/year). (Technical Report, p. 6 of 23). Five percent consumptive use of 123.84 ac-ft/year is 6.19 ac-ft/year, which if averaged over the entire year during which use will occur, amounts to 0.52 ac-ft/month, assuming all months are

equal in duration. This value must be added to irrigation consumptive use. (Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Department file; Exhibits 1 and 2)

63. The Applicant's water supply calculations, listed on Table 3 of Exhibit 1, indicate an annual volume of 124.11 ac-ft/year for domestic and commercial use in the two subdivisions and an annual volume of 132 ac-ft/year for irrigation, for a total maximum water demand of 256.11 ac-ft/year. The Applicant requests 560 ac-ft/year, which it states is based on DEQ standards. The remaining volume of approximately 304 ac-ft/year (560 ac-ft/year – 256.11 ac-ft/year) is unaccounted for. The Applicant has not provided a clear explanation or justification for the remaining requested volume of water. (Department file; Uthman Memo, dated July 11, 2008; Exhibit 1)

64. The Applicant states in Exhibit 2 that it proposes to mitigate the full volume and rate of consumptive use for the two proposed subdivisions. Applicant proposes to change the purpose of use of a total of 0.70 cubic feet per second (cfs) (i.e. 314 gpm) up to 138.21 ac-ft/year for mitigation purposes. (Table 3, Exhibit 1). If 123.84 ac-ft/year (i.e., in the Application) are required for domestic and commercial use in the two subdivisions, then about 436 ac-ft/year (560 ac-ft/year – 123.84 ac-ft/year) remain to serve irrigation requirements. If 138.21 ac-ft/year are required for irrigation demand, then there is a remaining volume of about 298 ac-ft/year (436 ac-ft/year – 138.21 ac-ft/year). The Applicant has not fully explained or justified this requested volume of water in Applicant's water supply calculations. (Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Department file; Exhibit 1)

65. A review of the Exhibits 1 and 2 presented at hearing indicate the irrigation consumptive use component will be mitigated by ditch water recharged to infiltration structures in the subdivisions from which ground water will flow under a natural hydraulic gradient toward the Gallatin River. Applicant states that the ground-water modeling conducted by the Applicant indicates that because the distance to the Gallatin River is about 1.5 miles, baseflow accretions to the river will be more or less constant over the period of diversion. (Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Department file; Exhibits 1 and 2)

66. Applicant estimates the recharge for mitigation of its consumptive use (138.21 ac-ft/year) as 293 gpm from May 15 through July 16, and August 16 through September 30 (109 days). (Table 3 of Exhibit 1). Dr. Nicklin states that modifying the recharge rate and distribution of the total consumptive use over different recharge time-frames will have little effect on the net stream depletion/accretion over time (i.e. Dr. Nicklin opines that a recharge rate of 314 gpm over a 100

day period produces the same results as the simulated model stated above). (Table 3 of Exhibit 1; Exhibit 1, p. 6). The Hearing Examiner cannot determine whether the Applicant proposes a recharge rate of 293 gpm or 314 gpm even if the effect is likely to be the same. Applicant must define exactly what it is proposing. (Department file; Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Exhibit 1 and 2)

67. The Applicant also has not adequately identified the irrigation period. An increase in the duration of the period of use will increase the irrigation consumptive use. The Applicant tabulates an irrigation demand of 388,282 gallons per day (gpd) assuming a 123-day period of irrigation (i.e. May 1 through August 31)[5]. Table 3 of Exhibit 1 (submitted at hearing) indicates that the period of irrigation will include 4 days in April through 12 days of October, which is 169 days[6]. The Applicant provided no explanation how it will have control over the timing of lawn and garden irrigation use. In the Applicant's *Position Memorandum*, submitted on January 28, 2008, the Applicant calculates that the use of water cannot create stream depletions that exceed 135.28 ac-ft over a 100-day irrigation season (i.e. May 15 and September 30). (Department file; Uthman Memo, dated July 11, 2008; *Position Memorandum*)

68. Applicant estimates the recharge for mitigation of its consumptive use schedule is from May 15 through July 16, and August 16 through September 30, which is 109 days. (Table 3 of Exhibit 1). The Applicant in Exhibit 2 states the aquifer recharge schedule is 100 days between May 15 and September 30 of each year, and testified at hearing to the same period. Both Exhibits were submitted at hearing. The Hearing Examiner presumes the Applicant is proposing a duration of recharge of 100 days. (Exhibits 1 and 2)

69. The water supply calculations section on page 6 of 23 of the Applicant's Technical Report suggests that irrigated acreage is 100.1 acres. The *Position Memorandum* lists 86 irrigated acres. The Applicant stated during the September 4th hearing that irrigated acreage can be approximated as 70% of the total acreage of the subdivisions. Exhibit 2, Attachment C Historic Use, states that Pioneer Crossing subdivision will occupy 173.844 acres and Centennial Village subdivision will occupy 44.747 acres, for a total of 218.59 acres. Seventy percent of 218.59 acres is 153.01 acres of lawn and garden irrigation, which differs from the previous estimates of irrigated acreage as 100.1 acres and 86 acres. The Applicant must make a firm decision on the number of irrigated acres in order to determine irrigation consumptive use.

[5] Applicant's Technical Report, p. 6 of 23.
[6] Table 3 of Exhibit 1 states the number of irrigation days is 168, but the Applicant was in error in the number of irrigation days for July (i.e. July has 31 days in the month but Applicant states 30 days for irrigation).

(Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Department file; Exhibit 2)

70. Regarding the proposed rate of mitigation, the Hearing Examiner notes that the Applicant's *Position Memorandum* suggests 0.75 cubic feet per second (cfs) or 148.76 ac-ft/year over a 100-day irrigation season. The Applicant's *Notice of Permit Conditions*, dated July 7, 2008, indicates 0.54 cfs or 107.11 ac-ft/year, assuming a 100-day irrigation period. The Applicant now states in its *Synopsis of Application* and testified at hearing that the new aquifer recharge rate is 0.70 cfs, assuming a 100-day irrigation period, which totals 138.21 acre-feet. Applicant's estimate of new aquifer recharge must be quantified with a consumptive use analysis. The record contains many conflicting positions, none of which are logically supported by the assertions in the Application. Therefore, analysis of the consumptive use and required mitigation are impossible to quantify. (Nicklin and Carstensen Testimony; Uthman Memo, dated July 11, 2008; Department file; Exhibit 2; Position Memorandum)

71. To summarize, the Applicant has presented the following examples of multiple variations for analysis: a) irrigation periods of 100 days, 123 days and 169 days; b) mitigation periods of 100 days and 109 days; c) a diverted amount of 256.11 ac-ft/year, but not the 560 ac-ft/year requested; d) proposed mitigation in the amounts of .75 cfs, .54 cfs and .70 cfs; e) irrigated acreage of 100.1 acres, 86 acres, 153.01 acres; f) irrigation consumptive use of 123.84 ac-ft/year, 124.11 ac-ft/year, and some other amount based on the changing estimates of irrigated acreage and length of irrigation season; and g) recharge for mitigation of its consumptive use (138.21 ac-ft/year) at rates of 293 gpm and 314 gpm. The Applicant has not presented a single credible value of irrigated acres and monthly water-use requirements for a consumptive use analysis. The Hearing Examiner cannot evaluate the Applicant's estimate of consumptive use because Table 1 is not included in Exhibit 2. Table 4, summarizing aquifer recharge and surface water mitigation over a 100-year period, is also missing from both Exhibits 1 and 2. The Department cannot determine from all of these multiple variations exactly what the Applicant's plan is for the proposed appropriation and the justification for it. (Uthman Memo, dated July 11, 2008; *Position Memorandum*; Department file; Exhibits 1 and 2)

72. I find the Applicant provided very limited factual evidence to quantify the amount of water consumptively used. The Applicant has failed to provide an adequate plan to demonstrate that the Applicant's use of water will be controlled such that the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state water reservation will not be

adversely affected. Applicant's plan further cannot be considered complete until all prior water rights on the source of supply, particularly surface water, throughout the area of potential impact are identified. (§ 85-2-311(1)(b), MCA)

Adequacy of Means of Diversion and Construction

73. Well #1 was drilled by a licensed water well contractor in accordance with the rules of the Montana Board of Water Well Contractors. The wells were grouted with bentonite to a depth of 80 feet bgs during the installation to avoid contamination by sealing off the surface gravel layers and upper aquifer zones. A stainless steel screen has been installed in the lower water bearing zone, and the well will have a sanitary well cap and a submersible pump installed, which will discharge below ground through a pitless adapter to a water main. The water main will connect to a pump house which will house a flow meter, pressure sustaining valve, variable frequency drive, a bypass line, and other fittings required for water distribution. One well is anticipated for Phase I construction, with a second well to accommodate Phases II-IV, primarily for fire protection. The pumps will be controlled by pressure switches. (Department file)

74. The design, construction, and operation of this system is regulated by the DEQ, and the design of the system is necessarily predicated on DEQ design standards produced to regulate the design of public water and sewer facilities. DEQ has reviewed and conditionally approved this public water system (EQ#05-2051), and the design is based on engineering standards commonly employed by engineers in designing and constructing such system. Applicant will be required to monitor and sample the system as required by DEQ. (Department file; Miller Testimony) I find that the proposed means of diversion, construction, and operation of the diversion works are adequate. (§ 85-2-311(1)(c), MCA)

Beneficial Use

75. Applicant has provided persuasive evidence that the proposed use is a beneficial use of water. Applicant intends to supply water within the identified place of use for municipal use including: (1) domestic water requirements for two subdivisions; (2) fire suppression; (3) commercial purposes within the subdivisions; and (4) lawn and garden irrigation within the subdivisions. The proposed use will benefit the homeowners who purchase homes within the subdivisions, other commercial patrons, and the public, as the system includes a fire-suppression component. I find the proposed use is a municipal use and beneficial use of water. (Department file; Miller Testimony)

76. Applicant asserts that the size of the water system and the estimate of the amount of water needed for the proposed use within the subdivisions are based on standards from DEQ Circulars (design standards used by DEQ to regulate the design of public water and sewer facilities). At full build-out, Applicant asserts the Pioneer Crossing and Centennial subdivisions will be comprised of a total of 363 lots, with uses being single-family dwellings, single family with accessory dwellings, and commercial structures. The Applicant is seeking approval of an annual flow rate of 575 gpm and volume of 560 ac-ft/year, which the Applicant states is based on these DEQ standards and requirements. However, Applicant submitted no information from DEQ regarding the size, flow and volume of its system. The record does not contain a copy of the Plan Approval from DEQ. Applicants' analysis in this Application is predicated solely on a proposed use of an annual volume of 124.11 ac-ft/year for domestic and commercial use and 132 ac-ft/year for irrigation in the two subdivisions, for a total of 256.11 ac-ft/year, subject to the inconsistencies explained above. The remaining volume of about 304 ac-ft/year is unaccounted for. (Department file; Miller Testimony; Uthman Memo, dated July 11, 2008; Exhibits 1 and 2).

77. I find the Applicant has not shown that 560 ac-ft/year of water is the amount needed to sustain the beneficial use. I find that that the Applicant has proven by a preponderance of the evidence that 256.11 ac-ft/year is the amount of water necessary to sustain the proposed beneficial use within the two proposed subdivisions. I find the Applicant has proven by a preponderance of the evidence that an annual flow rate of 575 gpm is the amount of water necessary to sustain the proposed beneficial use. (§ 85-2-311(1)(d), MCA)

Possessory Interest

78. Applicant is the owner of the property which has been designated in the Application as the place of use. Applicant has the possessory interest or the written consent of one with possessory interest in the property where the water will be put to beneficial use. Applicant will have consent prior to supplying water to a landowner, because water cannot be supplied to any landowner without the landowner subscribing to the service, which is by its nature, consent. Applicant has possessory interest in the proposed place of use. (Department file; § 85-2-311(1)(e), MCA)

Water Quality Issues

79. No valid objections related to adverse effect on the water quality of a prior appropriator were received by the Department. (Department file; § 85-2-311(1)(f), MCA)

80. No valid objections filed by the DEQ or a local water quality district relative to the proposed use not being in substantial accordance with the classification of the source of supply pursuant to § 75-5-301(1), MCA, were received by the Department. (Department file; § 85-2-311(1)(g), MCA)

81. No valid objections related to the ability of a discharge permit holder to satisfy effluent limitations of a permit under Title 75, chapter 5, part 4, were received by the Department. (Department file; § 85-2-311(1)(h), MCA)

Based on the foregoing Findings of Fact and the record in this matter, the Hearing Examiner makes the following:

CONCLUSIONS OF LAW

1. The Department has jurisdiction to issue a provisional permit for the beneficial use of water within the upper Missouri River basin closure area if an application qualifies for an exception as provided in § 85-2-343, MCA, (2005) and if the applicant proves the criteria in §85-2-311, MCA, by a preponderance of the evidence. (§ 85-2-311, MCA)

2. A permit shall be issued if there is water physically available at the proposed point of diversion in the amount that the applicant seeks to appropriate; water can reasonably be considered legally available during the period in which the applicant seeks to appropriate, and in the amount requested, based on an analysis of the evidence on physical water availability and the existing legal demands, including but not limited to a comparison of the physical water supply at the proposed point of diversion with the existing legal demands on the supply of water; the water rights of a prior appropriator under an existing water right, a certificate, a permit, or a state reservation will not be adversely affected based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied; the proposed means of diversion, construction, and operation of the appropriation works are adequate; the proposed use of water is a beneficial use; the applicant has a possessory interest, or the written consent of the person with the possessory interest, in the property where the water is to be put to beneficial use; and, if raised in a valid objection, the water quality of a prior appropriator will not be adversely affected, the proposed use will be substantially in accordance with the classification of water, and the ability of a discharge permit holder to satisfy effluent limitations of a permit will not be adversely affected. (§ 85-2-311(1) (a)-(h), MCA)

3. This Application is subject to the statutes and rules in effect at the time the application was submitted, and not those that have been enacted since then. *See* In the Matter of the Application for Beneficial Water Use Permit No. 24550-41QJ by Anderson Ranch, (Proposal for Decision, 1984). The Trout Unlimited decision established that the 2005 exception to the upper Missouri River basin closure for ground water that is not immediately or directly connected to surface water does not extend to new uses that involve the prestream capture of groundwater. Trout Unlimited, (2006), 331 Mont. 483, 133 P.3d 224. Pursuant to Trout Unlimited, the Department recognizes the connectivity between surface water and ground water and the effect of prestream capture on surface water. The Montana Supreme Court decision in Trout Unlimited applies retroactively. Id. *See* In the Matter of Application No. 41D-30002459 by Big Hole Grazing Association & Montana Department of Transportation and Application No. 41D-30002460 by Big Hole Grazing Association (Final Order, 2006); In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 And 41H 30013629 By Utility Solutions LLC (2006) (mitigation of depletion required); *see also* Dempsey v. Allstate Insurance Company (2004), 325 Mont. 207, 104 P.3d 483.

4. DNRC cannot process or grant an application for a permit to appropriate water within the upper Missouri River basin until final decrees have been issued in accordance with Title 85, chapter 2, part 2, MCA, for all of the sub-basins of the upper Missouri River basin. § 85-2-343(1), MCA. The upper Missouri River basin consists of the drainage area of the Missouri River and its tributaries above Morony Dam. (§ 85-2-342(4), MCA). The proposed wells are located within the upper Missouri River basin closure area. However, there are exceptions to this closure for applications for permits to appropriate water for domestic, municipal, or stock use. (§ 85-2-343(2)(c), MCA, and § 85-2-342, MCA). This Application is for municipal use. The Application falls under the exceptions to the upper Missouri River basin. (FOF 1-7; § 85-2-343(2)(c) and (e), MCA)

5. A public notice containing the facts pertinent to the permit application was published once in a newspaper of general circulation in the area of the source and mailed to certain individuals and entities. The Department received seven timely valid objections to the Application. (FOF 3-4; §§ 85-2-307, -308, -309, MCA)

Physical Availability

6. The Applicant has proven that water is physically available at the proposed point of diversion in the amount Applicant seeks to appropriate. (FOF 33-42; § 85-2-311(1)(a)(i), MCA)

Legal Availability

7. To comply with § 85-2-311(1)(a)(ii), MCA, an applicant must prove that, at least in some years, sufficient unappropriated water will be physically available at the point of diversion to supply the amount requested throughout the period of appropriation, and that at least in some years, no legitimate calls for water will be made on him by a senior appropriator. In the Matter of Beneficial Water Use Permit No. 76N-30010429 by Thompson River Lumber Company (December 2006); In the Matter of Application for Beneficial Water Use Permit No. 81705-g76F by Hanson (1992).

8. The Applicant has not shown water is legally available. Applicant estimates that 1,968.8 ac-ft/year is available in the source aquifer, and estimates the legal demands (existing appropriations of 1,405.92 ac-ft/year plus proposed demands of 560 ac-ft/year) within the cone of depression caused by pumping the ground water wells to be 1,965.92 ac-ft/year. The Applicant did not analyze all ground water water rights located with the potential impact area, including only 77 of the 137 ground water water rights. (FOF 43-49)

9. Additionally, the area of potential impact is not limited to ground water within the cone of depression; it must be extended to include the area impacted by depletions to the Gallatin River. The Town proposes to mitigate net depletions to surface water. But the Applicant has not identified how the alleged net depletion was determined in order to demonstrate that the depletions will be offset by the proposed amount of mitigation water. The Applicant has not identified the current existing legal demands throughout the entire area of potential impact for this Application, and it is not known from the record that the amount of water physically available exceeds the existing legal demands within the area of potential impact, which includes the surface water rights beginning on the Gallatin River and downstream where the depletion occurs. Applicant has failed to analyze all ground water and surface water rights throughout the area of potential impact which might be adversely affected in the non-irrigation season when no mitigation (augmentation) was proposed. Applicant's plan cannot be considered complete until all prior water rights on the source of supply throughout the area of potential impact are identified. (FOF 43-50; *See* In the Matter of Application for Beneficial Water Use Permit No. 41H 30023457 by Utility Solutions, LLC, Final Order, December 2007, Admin. R. M. 36.12.101; Admin. R. M. 36.12.120; § 85-2-311(1)(b), MCA)

Adverse Effect

10. The Applicant has not provided adequate evidence to support or explain the volume of water requested. The Applicant only reports a total appropriation of 124.11 ac-ft/year for domestic and commercial and 132 ac-ft/year for irrigation, which is a combined total of 256.11 ac-ft/year. Of a total volumetric request of 560 ac-ft/year, only 256.11 ac-ft/year are accounted for by the Applicant. The Applicant presented multiple variations of analysis of the use of the identified 256.11 ac-ft/year, none of which were reconcilable with the information in the record. Applicant proposes to change the purpose of use of a total of 0.70 cubic feet per second (cfs) (i.e. 314 gpm) up to 138.21 ac-ft/year for mitigation purposes, estimating the recharge for mitigation of its consumptive use (138.21 ac-ft/year) as 293 gpm or 314 gpm over a 100-day mitigation period. Applicant has not presented evidence to support its consumptive use calculations. (FOF 51-72)

11. The applicant bears the affirmative burden of demonstrating the applicable criteria, Mont. Code Ann. §85-2-311(1) are met, including the criterion that prior appropriators under an existing water right, a certificate, a permit, or a state water reservation will not be adversely affected. *See e.g.,* In the Matter of the Application for Beneficial Water Use Permit No. 25170-G41B by East Bench Grain & Machinery, Inc. (Final Order, March 1983) (The evidence must support a finding of no adverse effect, and it is the applicant's burden to provide it. If the applicant does not, the permit cannot be issued). As the Montana Supreme Court recognized in In the Matter of Beneficial Water Use Permit Numbers 66459-76L, Ciotti: 64988-G76L, Starner (1996), 278 Mont. 50, 60-61, 923 P.2d 1073, 1079, 1080, *superseded by legislation on another issue*:

> Nothing in that section [85-2-313], however, relieves an applicant of his burden to meet the statutory requirements of § 85-2-311, MCA, before DNRC may issue that provisional permit. Instead of resolving doubts in favor of appropriation, the Montana Water Use Act requires an applicant to make explicit statutory showings that there are unappropriated waters in the source of supply, that the water rights of a prior appropriator will not be adversely affected, and that the proposed use will not unreasonably interfere with a planned use for which water has been reserved.

The Court has likewise explained that:

> .... unambiguous language of the legislature promotes the understanding that the Water Use Act was designed to protect senior water rights holders from encroachment by junior appropriators adversely affecting those senior rights.

Montana Power Co. v. Carey (1984), 211 Mont. 91, 97-98, 685 P.2d 336, 340; *see also* Mont. Const. art. IX § 3(1).

Pursuant to § 85-2-311(1)(b), MCA, adverse effect must be determined based on a consideration of an applicant's plan for the exercise of the permit that demonstrates that the applicant's use of the water will be controlled so the water right of a prior appropriator will be satisfied. Applicant has modeled the depletion of the proposed appropriation to the Gallatin River. *See* Trout Unlimited (2006), 331 Mont. 483, 133 P.3d 224 (recognizing effect of prestream capture on surface water). However, Applicant has failed to provide a single, credible analysis supported by the record of the amount of the depletion and the mitigation water necessary to offset the depletion.

It is the applicant's burden to produce the required evidence, and not doing so constitutes a failure of proof. In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC. (Proposal for Decision, adopted by Final Order, 2005); East Bench, *supra*. The proposed appropriation is within the upper Missouri River basin closure. § 85-2-343 (2005), MCA. DNRC cannot assume an impact to a source is so inconsequential and negligible that it can be disregarded in a closed basin. Any depletion of water in a closed basin or any other basin from a new appropriation must be addressed so as to not cause adverse affect to a senior water right holder. Applicant failed to demonstrate a plan which provides for the mitigation of the depletion in the timing and amount of the depletion. *See e.g.*, In the Matter of Beneficial Water Use Permit Nos. 41H 30012025 And 41H 30013629 By Utility Solutions LLC (Proposal for Decision (2006), adopted by Final Order); In the Matter of Beneficial Water Use Permit Application No. 41H-30019215 by Utility Solutions LLC (Final Order, 2007) (depletions must be offset in timing, amount and location); In the Matter of Application for Beneficial Water Use Permit No. 41H 30026244 By Utility Solutions LLC (Final Order, 2008), *pending judicial review*, Shennum et al. v. DNRC et al., Cause No. CDV-2008-740, Montana First Judicial District Court, Lewis & Clark County. The Applicant has not proven that the water rights of a prior appropriator under an existing water right, a certificate, permit, or a state water reservation will not be adversely affected. § 85-2-311(1)(b), MCA. (FOF 51-72; § 85-2-311(1)(b), MCA)

Adequacy of Means of Diversion and Construction

12. The Applicant has proven that the proposed means of diversion, construction, and operation of the appropriation works are adequate. (FOF 73-74; § 85-2-311(1)(c), MCA)

Beneficial Use

13. Municipal use is a beneficial use. (§ 85-2-102(4), MCA). The Applicant has proven the proposed use of water is a beneficial use of water. (FOF 75; § 85-2-311(1)(d), MCA)

14. An appropriator may appropriate water only for a beneficial use. (§ 85-2-301, MCA, and § 85-2-311(1)(d), MCA). It is a fundamental premise of Montana water law that beneficial use is the basis, measure, and limit of the use. *See e.g.,* McDonald v. State (1986), 220 Mont. 519, 722 P.2d 598; Toohey v. Campbell (1900), 24 Mont. 13, 60 P. 396. The amount of water under a water right is limited to the amount of water necessary to sustain the beneficial use. *See e.g.*, Bitterroot River Protective Assoc. v. Siebel*, Order on Petition for Judicial Review*, Cause No. BDV-2002-519, Montana First Judicial District Court, Lewis and Clark County (2003), *affirmed on other grounds*, 2005 MT 60, 326 Mont. 241, 108 P.3d 518; Worden v. Alexander (1939), 108 Mont. 208, 90 P.2d 160; Allen v. Petrick (1924), 69 Mont. 373, 222 P. 451. Moreover, the Department is specifically prohibited, "[t]he department . . . may not issue a permit for more water than . . . can be beneficially used without waste for the purpose stated in the application." §85-2-312(1)(a), MCA. Waste is defined to include the "application of water to anything but a beneficial use." §85-2-102(23), MCA. An absence of evidence of waste does not prove the amount requested is for a beneficial use. In the Matter of Application for Beneficial Water Use Permit No. 76H-84577 by Thomas and Janine Stellick (Final Order, 1995). It is the Applicant's burden to prove the required criteria. A failure to meet that affirmative burden does not mean the criterion is met for lack of contrary evidence. It is the applicant's burden to produce the required evidence, and not doing so constitutes a failure of proof. In the Matter of Application to Change Water Right No. 41H 1223599 by MGRR #1, LLC., (Proposal for Decision, adopted by Final Order, 2005). *See also* In the Matter of Application No. 76GI 30012925 to Change Water Right Claim No(s) 76GI 40733-00, 76GI 94401-00, 76GI 94402-00 By Granite County (Proposal for Decision adopted in Final Order, 2008), *citing* In the Matter of Application No. 43B-30002710 by USA (Department of Agriculture – Forest Service) (Final Order, 2005); In the Matter of Application No. 41K-11226000 by Poulson (Final Order, 2002) (Applicant must prove the amount of water necessary to sustain the proposed purposes).

15. Applicant requests an annual volume of 560 ac-ft/year of water, and provides an analysis of 256.11 ac-ft/year of water. Applicant failed to prove by a preponderance of the evidence that

the 560 ac-ft/year of water requested is the amount needed to sustain the beneficial use, when its entire analysis in this Application is predicated on the use of 256.11 ac-ft/year. I find that that the Applicant has proven by a preponderance of the evidence that 256.11 ac-ft/year is the amount of water necessary to sustain the proposed beneficial use. (FOF 76; § 85-2-311(1)(d), MCA)

16. Applicant further requests an annual flow rate of 575 gpm of water. I find that that the Applicant has proven by a preponderance of the evidence that an annual flow rate of 575 gpm is the flow rate necessary to sustain the proposed beneficial use. (FOF 77; § 85-2-311(1)(d), MCA)

Possessory Interest

17. Applicant has proven by a preponderance of evidence that the Applicant has a possessory interest, or the written consent of the person with possessory interest, in the property where the water will be put to a beneficial use. (FOF 78; §85-2-311(1)(e) MCA; Admin R. M. 36.12.1802)

Water Quality Issues

18. The criteria in §§ 85-2-311(1)(f), (g), and (h), MCA, do not apply because no valid water quality objections were received. (FOF 79-81; § 85-2-311(2), MCA)

General

19. The Department may issue a permit subject to terms, conditions, restrictions, and limitations it considers necessary to satisfy the criteria for issuance of a beneficial water use permit. (§ 85-2-312, MCA; *see also,* Montana Power Co. v. Carey (1984), 211 Mont. 91, 96, 685 P.2d 336, 339). Applicant has not proven the criteria for issuance of a provisional permit. (§ 85-2-311, MCA)

WHEREFORE, based upon the foregoing Findings of Fact and Conclusions of Law, the Hearing Examiner makes the following:

PROPOSED ORDER

Application for Beneficial Water Use Permit No. 41H-30021840 by Town of Manhattan is **DENIED**.

NOTICE

This Proposal for Decision may be adopted as the Department's final decision unless timely exceptions are filed as described below. Any party adversely affected by this Proposal for Decision may file exceptions and a supporting brief with the Hearing Examiner. If those parties choose to have oral argument on the exceptions, those parties must request oral argument in their exceptions. Exceptions and briefs, and requests for oral argument, must be filed with the Department by **December 30, 2008**, or postmarked by the same date, and copies mailed by that same date to all parties. No new evidence will be considered. The parties will be notified of the time and place for oral argument on exceptions filed, *if requested*.

No final decision shall be made until after the expiration of the above time period, and due consideration of *timely* oral argument requests, exceptions, responses, and briefs.

DATED this 9th day of December, 2008.

Jolyn E. Eggart, Hearing Examiner
Department of Natural Resources
and Conservation
Water Resources Division
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CERTIFICATE OF SERVICE

This certifies that a true and correct copy of the PROPOSAL FOR DECISION was served upon all parties listed below on this 9th day of December, 2008, by first class United States mail:

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